Guest Editorial
Special Issue for ICSEC 2018

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The International Computer Science and Engineering Conference (ICSEC) is the premier forum for demonstrating technological advances and research results in the fields of Computer Science, Computer Engineering, Information Technology, and Emerging Intelligent Technology. Over the years, this conference has been held in turn by universities in Thailand. It is intended to provide researchers, educators, and professionals with the opportunity to exchange their discoveries and practices, and to explore future trends and applications of computer technologies. The annual symposium offers a great occasion to share research experiences and to discuss potential new trends in computer science and engineering.

With pleasure, we present this special issue of Journal of Internet Technology (JIT), devoted to the 22nd ICSEC, hosted by Chiang Mai University, Chiang Mai, Thailand, from 21 to 24, 2018. We invite some outstanding accepted papers in their extended versions and widely open for other submissions to this special issue. Each paper submitted to this special issue was rigorously reviewed by at least two reviewers in the corresponding research areas. Finally, we have four papers for this special issue. A summary of the papers is outlined below.

The first paper entitled "Random walks on the folded hypercube" is contributed by Hong Chen, Xiaoyan Li, and Cheng-Kuan Lin. In this paper, the authors study the global mean first-passage time (GMFPT) of random walks on the n-dimensional folded hypercube FQ_n, which is a variation of the hypercube Q_n. They present a concise formula to the Kirchhoff index by using the spectra of the Laplace matrix of FQ_n, and obtain an explicit formula to GMFPT, and then determine the GMFPT scaling, which roughly equals to 2^n. Besides, the authors show that it takes less time when random walks on FQ_n than that on Q_n. Moreover, they also explore random walks on FQ_n under the condition that there is a node with a trap.

The second paper entitled "The constructive algorithm of vertex-disjoint paths in the generalized hypercube under restricted connectivity" is contributed by Guijuan Wang, Jianxi Fan, Yali Lv, Baolei Cheng, and Shuangxiang Kan. In this paper, the authors propose a constructive algorithm for finding g disjoint paths in the r-dimensional generalized hypercube under the 1-restricted connectivity condition (i.e., g equals to the minimum number of vertices whose removal disconnects the generalized hypercube and such that each vertex has at least one fault-free neighbors in its component). In particular, the authors show that the maximum length of these g disjoint paths is bounded by $r + 2$.

The third paper entitled "A method of driving characteristics recognition on vehicle operation sequence" is contributed by Yu Zhang, Bo Shen, Yi-Chih Kao, and Hsin-Hung Chou. In this paper, the authors propose a method of driving characteristics recognition based on vehicle operation data. They employ the K-means algorithm to cluster the drivers and provide an idea to discover driving behavior in an unsupervised way. Consequently, analysis and experimental results show that the proposed method has good application significance on mining effective information of vehicle operation data.

The last paper entitled "Reversible data hiding in binary images by symmetrical flipping degree histogram modification" is contributed by Xiaolin Yin, Wei Lu, Wanteng Liu, and JunHong Zhang. In this paper, the authors propose a novel reversible data hiding method based on symmetrical flipping degree (SFD) histogram modification. They first define the SFD of the block, which is a visual score measured by the distance between the pixels in the block. The smaller SFD is, the better the visual quality the image has. Then the histogram is generated from the SFD, and it uses the zero or the minimum point to modify the pixels with high SFD as a preprocessing. Finally, the appropriate corresponding pixels are selected adaptively to flip for information embedding. Experimental results demonstrate the feasibility of their proposed method and the visual quality is satisfactory.

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Guest Editors

Jou-Ming Chang is a Distinguished Professor of the Institute of Information and Decision Sciences (IDS) at National Taipei University of Business (NTUB). He received the BS degree in Applied Mathematics from Chinese Culture University, Taipei, Taiwan (1987), the MS degree in Information Management from National Chiao Tung University, Hsinchu, Taiwan (1992) and the PhD degree in Computer Science and Information Engineering from National Central University, Zhongli, Taiwan (2001). Dr. Chang was a visiting scholar of Institute of Information Science at Academia Sinica, Taiwan (2012), International Sino College at SIAM University, Thailand (2017), and the Department of Mathematics at Beijing Jiaotong University (2018), respectively. He has served on the Director of IDS (2009-2012) and the Dean of the College of Management at NTUB (2014-2015). He also was a director of Association of Algorithm and Computation Theory, Taiwan (AACT) after 2013. Currently, he was a senior member of IICM, TAAC, AACT and IEICE. His major research interest includes graph theory, fault tolerance, and algorithm design for network optimization, combinatorial enumeration, and parallel and distributed computing.

Ekkarat Boonchieng has completed a Ph.D. in Computer Science from the Illinois Institute of Technology, United States. He is currently working at the Department of Computer Science as Associate Professor, Faculty of Science Chiang Mai University. His research focuses on computer networking, biomedical engineering, image processing, computer graphics and data science. He is now serving in The ECTI Association as a technical chair in computer section.

Ching-Nung Yang obtained his Ph.D. degree in Electrical Engineering from National Cheng Kung University. His B.S. and M.S. degrees, both were awarded in Department of Telecommunication Engineering from National Chiao Tung University. Dr. Yang served in National Dong Hwa University since 1999. His current title is Professor in Department of Computer Science and Information Engineering. He had been Visiting Professor to University of Missouri Kansas City, University of Milan, and University of Tokyo. He is currently a Fellow of IET (IEE) and an IEEE senior member. Professor Yang has done extensive researches on visual cryptography and secret image sharing, and is the chief scientist in both areas. In fact, a very important innovation of visual cryptography, the probabilistic visual cryptography, was firstly proposed by Professor Yang. His areas of interest include error correcting code, multimedia security, cryptography, and information security. He has authored two books and has published over 200 (including more than 100 SCI-indexed papers) professional research papers in the areas of information security and coding theory. In the meantime, he has served/is serving in international academic organizations. He serves as technical reviewers for over 40 major scientific journals in the areas of his expertise, and serves as editorial boards and editors of special issues for some journals. Also, he was invited as chairs, keynote speakers, and members of program committees for various international conferences. He is the recipient of the 2000, 2006, 2010, 2012, and 2014 Fine Advising Award in the Thesis of Master/PhD of Science awarded by Institute of Information & Computer Machinery.